Form 3160-5 (March 2012)

# UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

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FORM APPROVED OMB No 1004-0137 1, 2014

	Expires	October	31
ase Serial No			

Form 3160-5 (March 2012)		UNITED STATE ARTMENT OF THE I EAU OF LAND MAN	NTERIOR	SEP	10 201	Ex 5 Lease Serial No	OMB No 1004-0137 pires October 31, 2014
	ot use this fo	OTICES AND REPO orm for proposals to Use Form 3160-3 (A)	o drill or to	<u>re-</u> enterî anı	nd Mana	NMSF079600 6'lfTindian, Allottee or igemeii-	Tribe Name
	SUBMIT	IN TRIPLICATE - Other	instructions on	page 2	, <u>, , , , <del>, , , , , , , , , , , , , , </del></u>	7 If Unit of CA/Agree	ment, Name and/or No
1 Type of Well						8 Well Name and No	
✓ Oil We	II Gas W	ell Other				CW Roberts #5	
2. Name of Operator Four Star Gas & Oil	Company					9 API Well No. 30-039-21295	
3a Address ATTN, Regulatory Specials 332 Road 3100 Aztec Nev	st w Mexico 87410		3b Phone No ( 505-333-1941	include area code	?)	10 Field and Pool or E 39189 Lindrith Gallu	-
4 Location of Well (I	Pootage, Sec., T.,F	R.,M., or Survey Description)				11 County or Parish, S	
1850' FNL 1650' FWL	Sec 17, Twp 25N, Rr	ng 3W				Rio Arriba, New Mex	(ICO
	12 CHEC	K THE APPROPRIATE BO	X(ES) TO INDI	CATE NATURE	OF NOTIO	CE, REPORT OR OTHE	ER DATA
TYPE OF SUB	MISSION			ТҮР	E OF ACT	TION	
Notice of Intent		Acidize	Deepe			uction (Start/Resume)	Water Shut-Off
		Alter Casing	=	re Treat		amation	Well Integrity  Other Perforate and
Subsequent Rep	ort	Casing Repair Change Plans	=	onstruction nd Abandon	=	omplete porarily Abandon	fracture
Final Abandonn	nent Notice	Convert to Injection	Plug B			er Disposal	
the proposal is to Attach the Bond i following comple testing has been c	deepen directional inder which the watton of the involve completed. Final A	ally or recomplete horizontally ork will be performed or proceed operations. If the operation	y, give subsurfactivide the Bond Non results in a mu	ce locations and noting on file with BI of the completion of the c	neasured an LM/BIA. For recomp	nd true vertical depths o Required subsequent rep letion in a new interval	and approximate duration thereof f all pertinent markers and zones forts must be filed within 30 days a Form 3160-4 must be filed once completed and the operator has
		00 psi, Bradenhead press Ws (250 lo/1500 high). Ni		Bradenhead to	zero. RU t	flowback line. Bleed (	gas to flowback tank. Pressure
workstring.	I floor. NU Clas	s III stack. Pressure test p ange out 2-3/8" pipe ram					Receive 8300' of 2-7/8" L-80 1500 high. Tests good.
7/25/2012 SICP = 380 psi. Tally 2-7/8" workstring. Caliper elevators. PU 7" casing scrapper & start TIH. Continue TIH w/ casing scrapper. LD scrapper. PU 7" RBP / packer. TIH to 1969'.					RCVD SEP 13'12 OIL CONS. DIV.		
See attached for ren	nainder of detail	s.					vidi.d
14 I hereby certify that	t the foregoing is tr	rue and correct Name (Printed	d/Typed)				
April E. Pohl				Title Regulator	y Special	ist	
Signature 🗸	prilef	oh1		Date 9-/	0-18	ζ	
THIS SPACE FOR FEDERAL OR STATE OFFICE USE							

entitle the applicant to conduct operations thereon Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any deposiment of agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

Title

Office

Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would

Approved by

#### 7/26/2012

SICP = 320 psi. Continue TIH & set RBP @ 6990'. Load 40 bbls of 2% KCL biocide water on plug, set packer. Would not pressure-up. Move plug up to 6973'. Load water on plug, set packer. Pressure test failed. Move plug to 6500'. Load water onto plug. Test failed, would not pressure-up.

TOH & break-out tools. No visible marks or damage of any kind on packer elements. Tools had gritty paraffin stuck in crevices.

#### 7/27/2012

Multigas readings 20.9 oxygen, 0 H2S, 0 CO2, 0 LEL. Spot Poor Boys & take-on 60 bbls 2% biocide water. Spot & RU Poor Boys at well.

Hot Oil 7" casing 60 bbls @ 250 deg.

RIH w/ 7" CBP & set same @ 6980'. Fluid level detected @ 3200'. POOH.

Load hole from fluid level. Pressured to 500 psi. Allow air/water flip-flop.

RIH & pull Schlumberger CBL. RU WSI & test casing to 500 psi surface pressure. Rock solid chart.

Perf MesaVerde w/ 4" HEGS guns 3 spf 5812-18, 5835-44, 5857-5890, 5933-36, & 5966-70'. Fifty-four feet of perfs over 158' interval. One hundred sixty-five 0.42" holes. RD Schlumberger.

Pressure test 3-1/2" pipe rams 250 psi low, 1500 psi high.

# 7/28/2012

TIH w/ packer on 3-1/2", 9.3 # tubing. Continue TIH & set packer @ 5702'.

Move-out racks & hydrawalk. RU frac valve / guide for stinger into tubing. RU stinger.

#### 7/29/2012

RU HES. Pump & ball-off w/ acid.

Delta Frac well w/ 83,569 lbm ottowa 20/40 sand, Max treating pressure - 8055 psi. Average treating pressure - 7481 psi. Max wellhead rate ~ 37 bpm, Fluid to recover - 657 bbls. Final ISIP - 3818 psi. 5 min - 2136 psi. 10 min - 2003 psi. 15 min = 1912 psi.Annulus pressure started @ 100 psi. Max pressure ~ 450 psi. Annular pressure bled down with treating pressure.

RD HES. RD Stinger.

Finish RU WSI flowback.

Open well up @ 1700, 1400 psi, 10/64 choke flowing back nitrogen.

#### 7/30/2012

Flowback well.

#### 7/31/2012

RD flowback. RD frac valve & tubing hang-off (BO2 connector). Unseat packer. TOH LD 3-1/2" frac string. RD WSI flowback equipment and frac stack. Set-up HydraWalk & racks. RU both 3" lines to flowback.

Unseat Baker packer & TOH LD 3-1/2" tubing.

## 8/1/2012

SICP = 120 psi. Change to 2-7/8" rams & pressure test 250 psi low / 1500 psi high. Tests good. Load-out 3-1/2" tbg to Oil Tool company. Replace seals on swivel.

MU junk mill &TIH. Continue in hole to 5040'. Hook-up air-foam unit and unload well. TIH to (5670') just above MesaVerde perfs (top perf 5812').

#### 8/2/2012

SICP = 440 psi. TIH to just above CBP, 6980'. Unload well w/ air-foam unit & blow down well. Establish circulation & drill CBP. Unload feed-in from Gallup & Dakota. Circulate sweep. Hang swivel. TOH to above MesaVerde.

### 8/3/2012

SICP = 860 psi. Transfer 2% KCl water to rig's frac tank. Pull two loads of flowback.

Blow well down. Unload well from above MesaVerde. TIH & tag @ 8054'. Unload well from tag. PU swivel. Establish circulation & drill 10' of hard fill. TOH to above MesaVerde perfs.

#### 8/6/2012

Check well, SICP - 960 psi, SITP - 0 psi, Open well to flowback tank RIH w/ mill, tag for fill at 8072 on 256 jts
Start air, establish circulation, Built to 1000 psi then started unloading

Start mist at 12 bwph & 400 psi, Drlg, Made 4' in first 2 hrs recovering frac sand, small pieces of rubber, Broke thru @ 1200 hrs @ 8076', Cont cleaning out, Clean out well to 8146' (10' out on jt 259, very hard drlg at this pt,circ clean, recovering mostly frac sand, a few very small pieces of scale. SD air. LD one jt, rack swivel, POOH w/ 37 stnds 2 7/8 workstring to 5795'. Secure well, SDFN.

# 8/7/2012

Check well, SICP - 820 psi, SITP - 0 psi (string float), Open well to flowback tank
Caliper Elevators, RIH w/ 75 jts workstring, (Held BOP drill) Tag for fill @ 8138' 8' fill overnight
Start air, establish circulation, Built to 1150 psi before unloading, Unloaded 70 bbls w/ trace of oil

Start mist at 12 bwph, PSI falling to 350 psi, One 3 bbl sweep/hr, Washout fill to 8146, Drill/cleanout from 8146' to 8149 hard drilling, continue cleaning out to 8188' pipe measurement (PBTD@8168) recovering trace of oil, frac sand, scale and plug pieces. Did not tag a solid bottom.

Circulate well off bttm, Pumping 2 - 3 bbl sweeps/hr, Recovering 1/2 to 1 cup frac sand per 5 gal sample, Last sample taken down to 1/4 cup/5 gallon sample

SD air, Rack back swivel, POOH w/ 76 jts to above Mesaverde perfs, Secure well, SDFN.

## 8/8/2012

Check well, SICP - 760 psi, SITP - 0 psi (string float)Open well to flowback tank and bleed down. RIH w/ 2 7/8" workstring, Tag for fill @ 8175' (13' fill overnight)

Start air, establish circulation. Built to 1000 psi.

Start mist @ 13 bwph, wash out fill @ 375 psi to 8188' pipe meas, recover frac sand, pump sweeps Samples show just a trace of sand, SD air, POOH, LD 2 7/8" workstring Offload 1/2 of prod pipe, load and sent 1/2 of workstring out. Secure well, SDFN.

#### 8/9/2012

Check well, SICP - 720 psi. Open well to flowback tank.

PU 2 3/8" elevators and caliper same. Change out pipe rams to 2 3/8", PU and install hangar, Test rams to 250/1500 psi. Test good.

Take delivery of remaining 2 3/8" prod tbg, Load out remaining 2 7/8" workstring and returned. Tally Pipe

PU & RIH w/ Muleshoe, SN, 2 3/8 L80 tbg

Continue in hole w/ 2 3/8 prod tbg

Load remaining 2 3/8 tbg to racks, tally same

Cont in hole w/ 2 3/8 prod tbg, PU Hangar and land same. Total of Muleshoe(32), SN(1.10), 75 jts 2 3/8 4.7# L80 8rd EUE(2378.02), TAC(2.80), 2 jts(63.55), 4' pup(4.15), 176 jts((5584.23), 4' pup(4.12), 8' pup(8.16), 10' pup(10.10), 1 jt (31.76), Hangar(0.68), 254 jts total + muleshoe, EOT 8134.67, SN - 8102.67

RD Tongs, floor, ND annulars, ND BOP's

PU on hangar, set slips, Remove Hangar, Attempt to set TAC in tension, tried numerous times. Would not set. Install and land hangar, Left anchor unset, NU WH, Test void to 1500 psi. Secure well, SDFN.

#### 8/10/2012

Check well, SICP - 700 psi. SITP - 0 psi. Open well to flowback tank.

PU and RIH w/  $2" \times 1 \times 1/4 \times 18$  RHAC pump w/ strainer nipple , and shear tool,  $4' \times 7/8"$  stabilizer bar, RIH in singles w/ 3/4" rods

Continue in hole w/ new 7/8, 3/4 rod string. Total of 18' RHAC pump, 2' x 3/4 pony w/ shear tool, 7/8" x 4' stabilizer bar, 213 - 3/4" x 25' rods, 109 - 7/8" x 25 rods, Space out w/ 2', 4', 6' & 8' x 7/8" pony rods,  $1 \frac{1}{4}$ " x 26' PR

Load -test tbg to 500 psi, Test good, Check pump action w/ rig to 500 psi, Test good. Clamp off well. RDMO.



# **Wellbore Schematic**

Lease Business Unit Basın(New Mexico) CW Roberts 05 Roberts, C.W Mid-Continent/Alaska Original Hole, 9/10/2012 9.10 55 AM **Job Details** Release Date Job Category Start Date (ftKB) Vertical schematic (actual) Major Rig Work Over (MRWO) 7/23/2012 8/10/2012 Casing Strings Tubing Hanger, 14-15, 0 68, 7. Set Depth (MD) (ftKB) . 1 995, 2-1 14 1 OD (in) Wt/Len (lb/ft) Casing Hanger, 14-15, 1 00, 7, Csg Des Grade Top Thread Surface 6 366 2-1 10.3/4 32.75 H-40 344 14 8 Production Casing 23.00 J-55 8,200 **Tubing Strings** Tubing - Production set at 8,134.7ftKB on 8/9/2012 10:30 Tubing, 15-46, 31 76, 2 3/8, 1 995; 2 Tubing Descriptio Tubing - Production 8,120.67 8/9/2012 8,134 7 30 ; Jts OD (in) Wt (lb/ft) Grade Btm (ftKB) Tubing Pup Joint, 46-57, 10 10, 2 Tubing Hanger 0.68 14 7 3/8, 1.995, 2-3 Tubing 46.4 Tubing Pup Joint, 57-65, 8 16, 2 3/8 2 3/8 4 70 1-80 31 76 1 995, 2-4 Tubing Pup Joint 2 3/8 4.70 L-80 10 10 56 5 Tubing Pup Joint, 65-69, 4 12, 2 3/8 1 995, 2-5 Tubing Pup Joint 1 2 3/8 4 70 L-80 8.16 64.7 Casing Joint, 14-344; 330 00, 10 3/4, 10 192, 1-1 Tubing Pup Joint 2 3/8 4.70 1 -80 4 12 68.8 1 Surface Casing Cement, 14-344; 64 8 176 2 3/8 4.70 L-80 5,584 23 5,653.1 1/2/1977 **Tubing Pup Joint** 2 3/8 4.70 L-80 5.657.2 4.15 1 68 9 Casing Joint, 15-4,161, 4,146 00, 7, 6 366, 2-2 Tubing 2 2 3/8 4 70 L-80 63.55 5,720.8 Tubing, 69-5,653, 5,584 23, 2 3/8 1 995 2-6 Anchor/catcher 5,723 6 2 80 7 Production Casing Cement, 14-Tubing 2,378 02 2 3/8 8,101.6 75 4.70 L-80 4,161, 3/12/1977 4 161 Stage Tool, 4,161-4,164, 3 00, 7, Pump Seating Nipple 2 3/8 1 10 8.102 7 6 366 2-3 4 164 0 Mule Shoe 2 3/8 4.70 J-55 32.00 8.134.7 Casing Joint, 4,164-6,165, 2,001 00 7, 6 366, 2-4 5 652 9 Rod Strings Tubing Pup Joint, 5,653-5,657, 4.15, 2 3/8, 1 995, 2-7 Long rod on 8/10/2012 08:00 5 657 2 Tubing, 5,657-5,721; 63 55, 2 3/8, Run Date Set Depth (ftKB) String Length (ft) 1 995, 2-8 8.120.25 8,120.0 Long rod 8/10/2012 5 720 6 Anchor/catcher, 5,721-5,724, 2 80, 7 Item Des Jts OD (in) Wt (lb/ft) Grade Len (ft Btm (ftKB) 1 995 2-9 5 722 4 Polished Rod 26.00 25.8 1 1/4 5.750 0 Pony Rod 7/8 8.00 33.8 Pony Rod 7/8 6.00 39.8 1 -Cased Hole, 5,812-5,818, 7/27/2012 Pony Rod 4 00 43.8 7/8 1 D Pony Rod 7/8 Ď 2.00 45 8 5 953 Cased Hole, 5,933-5,936, 7/27/2012 Sucker Rod 109 7/8 2 22 П 2.725 00 2.770 8 5 936 0 Sucker Rod 213 3/4 1.63 5,325.00 8,095.8 4004 Stabilizer Bar 7/8 4 00 8,099 8 Cased Hole, 5,966-5,970, 7/27/2012 Pony Rod, w/ shear tool 3/4 2 00 8,101.8 1 Production Casing Cement; 5,790-6.165. 3/12/1977 Rod Pump, 2 x 1 1/4x18x18'3' 2 18 25 8,120.0 6 165 0 Stage Tool, 6,165-6,168, 3 00; 7, Perforations Shot Tubing, 5,724-8 102, 2,378 02, 2 3/8, Dens 6 166 1 Entered Shot 1 995 2-10 Top (ftKB) Btm (ftKB) (shots/ft Zone & Completion -Cased Hole, 7,010-7,246, 6/5/2007 7 006 8 7/27/2012 5,812.0 5.818 0 3 0 Mesa Verde, Original Hole Casing Joint, 6,168-8,168, 2,000 00, 7/27/2012 5.933 0 5,936 0 3.0 Mesa Verde, Original Hole 7 6 366 2-6 7/27/2012 5,966.0 5,970 0 3 0 Mesa Verde, Original Hole 6/5/2007 Cased Hole, 7,884-8,124, 6/5/2007 7,010 0 7,246 0 20 Gallup "H", Original Hole 228 6/5/2007 7,884 0 8,124.0 20 74 Dakota, Original Hole 8 099 1 Other Strings Run Date Pull Date 6 101 7 Set Depth (ftKB) Com Pump Seating Nipple, 8, 102-8, 103; 1 10, 2 3/8, 1 780, 2-11 8 102 2 Other In Hole Mule Shoe, 8,103-8,135, 32 00, 2 3/8, 1 995, 2-12 Btm (ftKB) Run Date Pull Date Des Top (ftKB) Com Cement 8,168 0 8,200.0 3/12/1977 8 124 0 B 134 5 Float Collar, 8,168-8,169, 1 00, 7, 6 366, 2-7 Casing Joint, 8,169-8,199, 30 00, 7, £ 169 0 6 366 2-8 Float Shoe, 8,199-8,200, 1 00, 7, 6 366, 2-9 Production Casing Cement, 6,170-8 200 t 8.200. 3/12/1977 8 210 0 Report Printed: 9/10/2012 Page 1/1